Audio / Video & adat be/ki menet

TV SCART	RGB, CVBS Video, Audio L, R kimenet
VCR SCART	CVBS Video, Audio L, R kimenet RGB, CVBS, Audio L, R bemenet
RCA	CVBS Video kimenet, Audio L, R bemenet
S/PDIF	Digital Audio kimenet (Fiber-Optic)
RS-232C	9 pin D-SUB (Male) típus, átviteli sebesség 115Kbps
USB	USB 2.0 Host Support (első/hátsó)

RF Modulátor

RF csatlakozó	75Ω, IEC 169-2, Male/Female
Frekvencia	470 ~ 860MHz
Kimeneti csatorna	CH 21 ~ 69 Remodulátorhoz
TV Standard	PAL G/ I / K menüben beállítható
Beállított csatorna	CH 36 (vagy TBD) Menüben változtatható szoftver

Előlap

Nyílás	1 USB Host nyílás 1 Smart Card nyílás
Vezérlés	7 Gomb
Kijelző	VFD (Vacuum Fluorescent Display)

Áramellátás

Bemeneti feszültség	AC 100 ~ 250V, 50/60Hz
Típus	SMPS
Teljesítmény felvétel	Max. 25W
Készenléti állapotban	Max. 8W
Védelem	Saját belső biztosíték és villám elleni védelem

Méretek

Méret (Sz x M x M)	340mm X 60mm X 230mm
Súly (Netó)	1.6Kg
Működési hőmérséklet	0°C ~ +45°C
Tárolási hőmérséklet	-10°C ~ +70°C

S+T Dynamic Combo

USER'S MANUAL

TSCX PVR READY

Digital Combo Receiver

OPTIBOX®

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Safety Precautions

1. Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not reverse the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING *TO PREVENT FIRE OR SHOCK HAZARD DO NOT EXPOSE THE SET TO RAIN OR MOISTURE.*

2. Notice

- ✓ These serving instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- ✓ The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- ✓ The mains plug is used as the disconnect device. The disconnect device shall remain readily operable.

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER(OR BACK). NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The Lightning Flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of un-insulated "dangerous voltage" within the product enclosure that may be of sufficient magnitude to constitute a risk of shock to persons

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product

Before You Begin

1. Main Features

- ✓ Digital Satellite / Terrestrial Combo
- ✓ Time Shifting with External USB 2.0 Devices (Max. 3 Hours)
- ✓ Recording & Playback with External USB 2.0 Devices
- ✓ Recording and Time Shifting Simultaneously
- ✓ Recording and Playback Simultaneously
- ✓ Event Recording by EPG
- ✓ Dual USB 2.0 Host Support (MP3 Player & JPEG Viewer)
- ✓ Software & Channel Database Transfer via USB
- ✓ 8 Digit VFD on the Front Panel

- ✓ Blind scan
- ✓ MPEG-II Digital & Fully DVB Compliant
- ✓ Multi-LNB Controlled by DiSEqC Control Version 1.0, 1.1, 1.2 and USALS
- ✓ Multi-Satellite Search
- ✓ Support EPG (Electronic Program Guide)
- ✓ On-Screen Display with 65535 Color Full Resolution
- ✓ Favorite Channel Groups
- ✓ Powerful Channel Control by Favorites, Lock, Skip, Move and Delete
- ✓ Channel Sorting by Alphabet, Transponder and CAS
- ✓ Multi-language Supported (OSD & Menu)
- ✓ Teletext Support
- ✓ Maximum 10,000 channels Programmable
- ✓ Multi-picture Display
- ✓ Parental Lock / System Lock / Installation Lock
- ✓ CVBS Video & Audio Output via RCA
- ✓ CVBS, RGB Video & Audio Output via TV SCART
- ✓ Optical Output for Digital Audio
- ✓ Supply 0/12V Output

2. Accessories

User's Manual

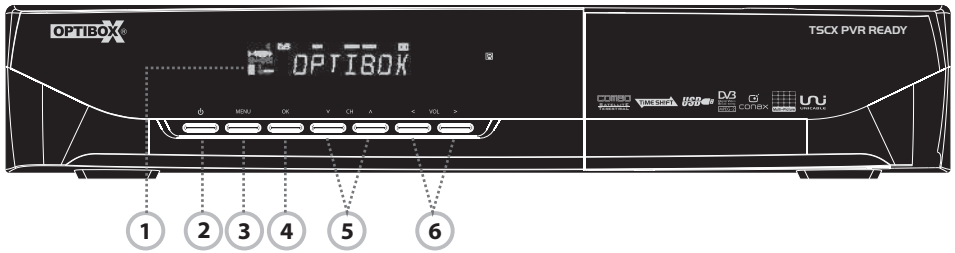
Remote Control

AAA size Batteries X 2

NOTE *If any accessories listed above are missing, contact the sales representative where you purchased this unit.*

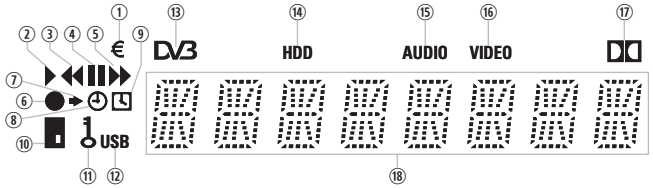
Hardware Description

1. Front Panel Configuration



1. VFD(Vacuum Fluorescent Display) :

The VFD consist of 8-digit letter and various icons. These letters and icons display the status of receiver as follows.



① € : Indicates that current service is pay service.
② ▶ : Turned on during playback.
③ ◀◀ : Turned on during rewind in playback mode.
④ ▮▮ : Indicates that current service is paused.
⑤ ▶▶ : Turned on during fast forward in playback mode.
⑥ ● : Turned on during recording.
⑦ ➧ : Turned on when you press a button in remote controller.
⑧ : Indicate that sleep timer is set up.
⑨ : The time that is set with timer manager is come, this icon is turned on.
⑩ : Indicates that smart card is inserted.
⑪ : Indicates that current service is locked.
⑫ **USB** : Indicates that external USB device is connected.
⑬ DVB : Turned on during live mode.
⑭ **HDD** : Indicates that set-top box is accessing files in the external USB device.
⑮ **AUDIO** : Indicates that current service is radio service.
⑯ **VIDEO** : Indicates that current service is TV service.
⑰ DD : Indicates that current service supports Dolby digital audio.
⑱ : Display service name, time and other information with letter.

2. POWER Button :

Press to switch between STANDBY and POWER ON modes.

3. MENU Button :

Press to enter the main menu or to move to the previous menu.

4. OK Button :

Press to display the service list in non-menu mode and to select an item or confirm in menu mode.

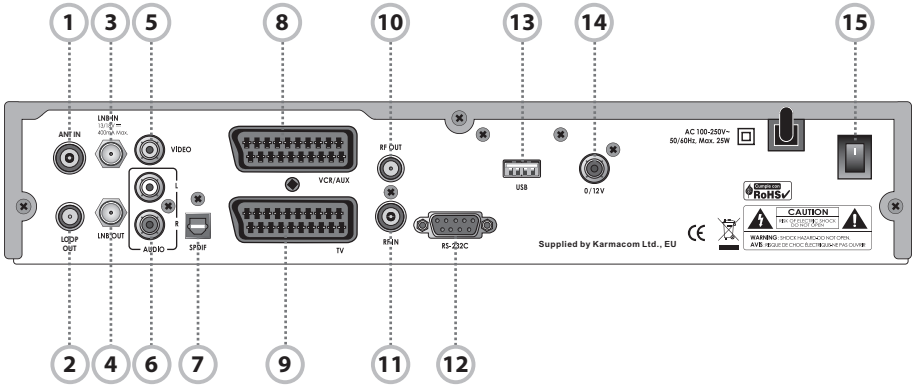
5. CH Up/Down Button :

Press to change services in normal mode, to move the highlighted-bar UP/DOWN in menu mode.

6. VOL Up/Down Button :

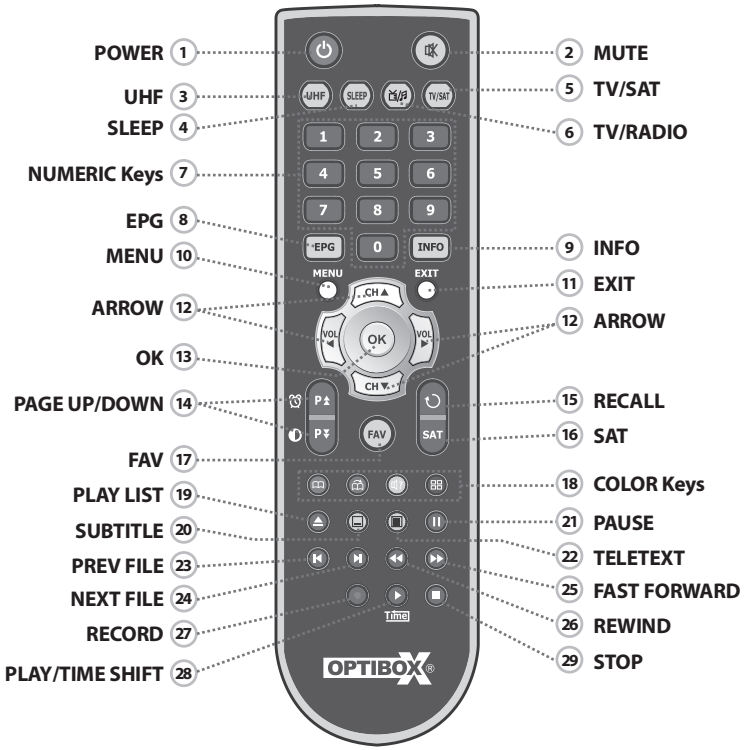
Press to change audio volume or to navigate menu in menu mode.

2. Rear Panel Configuration



1. ANT IN : Use to connect a aerial antenna.
2. LOOP OUT : Use it when connecting to RF input on your TV or VCR.
3. LNB IN : Use to connect a satellite antenna.
4. LNB OUT : Use it when connecting to another STB for loop-through.
5. VIDEO : Use to connect to video input of TV or VCR.
6. AUDIO L/R : Use to connect audio left, right of TV or VCR.
7. SPDIF : Use to connect SPDIF to digital audio equipment. (Optic)
8. VCR SCART : Use to connect to the VCR via a SCART cable.
9. TV SCART : Use to connect to the TV via a SCART cable.
10. RF OUT : Use to connect to RF(ANT) input jack of TV.
11. RF IN : Use to connect a general Aerial Antenna.
12. RS-232C : Use it when connecting to your PC.
13. USB : Use to connect to external USB device.
14. 0/12V : Use when you need DC 12V power supply.
15. POWER : Power switch

3. Remote Control Unit



1. POWER : Turns the STB On/Off.

2. MUTE : Turns the sound On/Off.

3. UHF : To adjust UHF service.

4. SLEEP : To adjust sleep timer.

5. TV/SAT : Toggles the TV output source between the satellite input and UHF/VHF antenna input.

6. TV/RADIO : Switches between TV and Radio.

7. NUMERIC Keys : Controls the numerical operation and service numbers directly.

8. EPG (Electronic Program Guide): Show the TV/Radio program guide.

9. INFO : Shows the information of the current program. If you press one more, detail information box will be shown.

10. MENU : To enter the main menu or to move to the previous menu.

11. EXIT : Exit from the menu or pop-up window.

12. ARROW : Moves the highlight bar for selecting options on the menus. And this key is used to change services(**CH▲** / **CH▼**) or change audio volume (**VOL◀** / **VOL▶**).

13. OK : Show the service list in non-menu mode and select an item or confirm in menu mode.

14. PAGE UP/DOWN : Move to the next or previous page if more than one page are available. **PAGE UP** key is also used as hot-key to move to Timer Manager menu(Refer to 1.2 Timer Manager). And **PAGE DOWN** key is also used as hot-key to move to Picture Adjust window (Refer to 1.6 A/V Output Setting).

15. RECALL : Moves to previous service.

16. SAT : To change the satellite groups.

17. FAV : To change the favorite groups.

18. COLOR Keys : Used for special function in menu. **RED** key is used to add or delete the current position as a bookmark. **GREEN** key is used to go to the next bookmark position. **BLUE** key is used to display multiple pictures.

19. PLAY LIST : To display recorded service list.

20. SUBTITLE : To show multilingual subtitle.

21. PAUSE : This key is used to pause the video. Press once more to resume the video.

22. TELETEXT : To show the digital teletext.

23. PREV FILE : To play the previous MP3 file in MP3 play mode.

24. NEXT FILE : To play the next MP3 file in MP3 play mode.

25. FAST FORWARD : Start fast forward or fast motion playback. Change the speed of forward playback.

26. REWIND : Rewind when the progress bar is displayed. Start reverse playback. Change the speed of reverse playback.

27. RECORD : To start recording.

28. PLAY/TIME SHIFT : Display the progress bar of playback when no progress bar is displayed. Start playback with normal speed. Return to normal speed from trick mode.

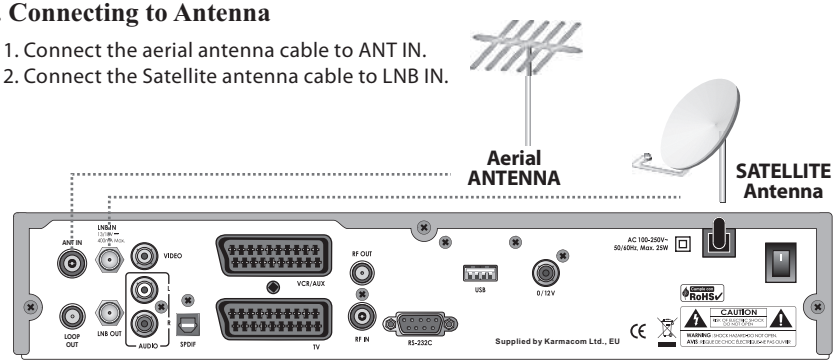
29. STOP : To stop time shifting, play back or recording.

NOTE	*When inserting batteries, make sure that the polarity (+/-) is correct.*

Connections Diagram

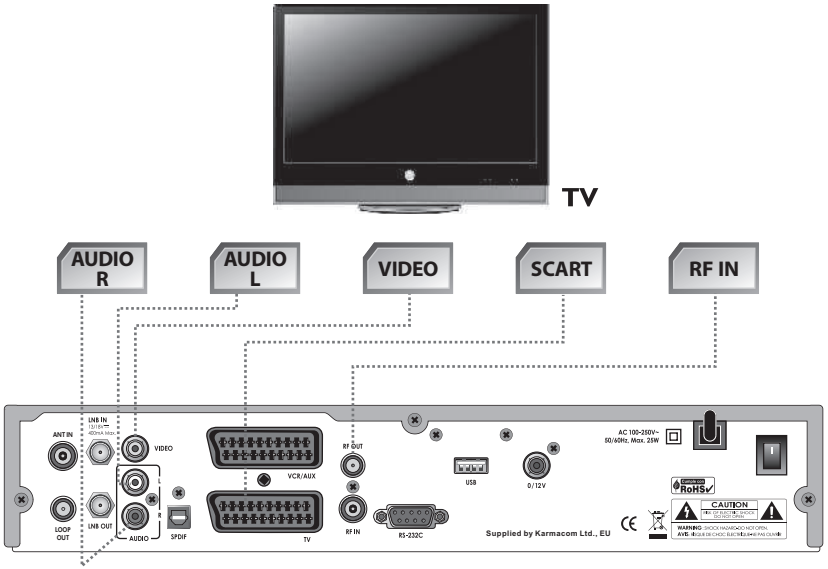
1. Connecting to Antenna

1. Connect the aerial antenna cable to ANT IN.
2. Connect the Satellite antenna cable to LNB IN.



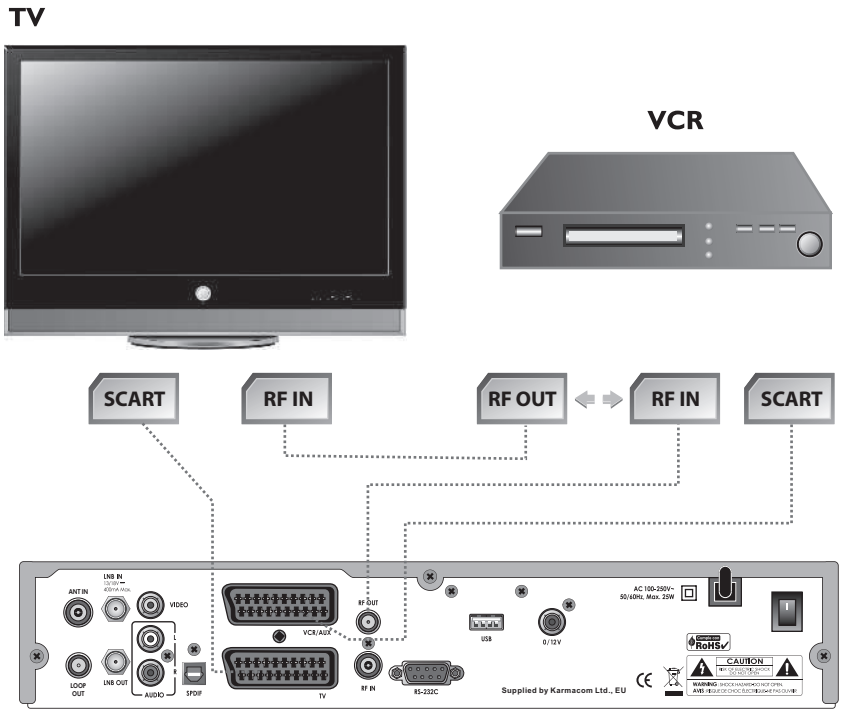
2. Receiver to TV with RF

1. Connect antenna cable to receiver, refer to above section, ***1. Connecting to Antenna.***
2. Connect the RF OUT to RF IN of TV.
3. Connect the VIDEO and AUDIO L, R to VIDEO IN and AUDIO L, R IN of TV.
4. Connect the TV SCART to SCART of TV.



3. Receiver to TV and VCR

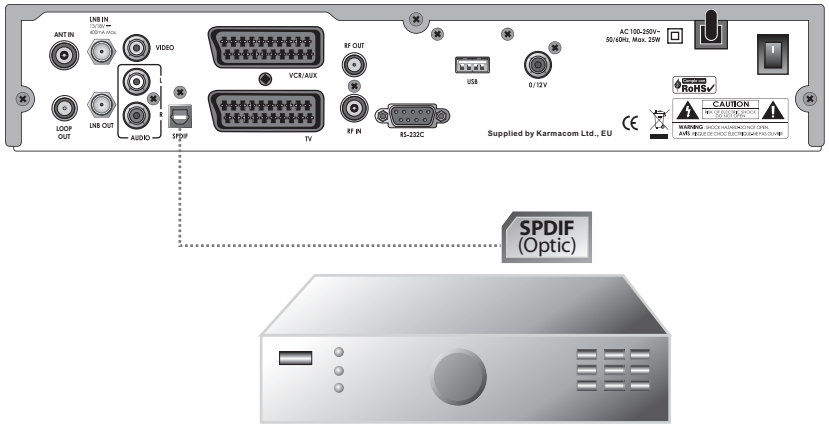
1. Connect antenna cable to receiver, refer to above section, ***1. Connecting to Antenna.***
2. Connect the RF OUT to RF IN of VCR.
3. Connect RF OUT of VCR to RF IN of TV.
4. Connect the TV SCART to SCART of TV.
5. Connect the VCR SCART to SCART of VCR.
6. Connect other jacks to the appropriate jacks of TV refer to above section, ***2. Receiver to TV with RF.***



4. Receiver to Digital Audio Equipment

1. To get better quality audio, you can use digital audio via optical cable.
   If you have a digital audio equipment, connect SPDIF to Digital audio input of the equipment.

2. Connect other jacks to the appropriate jacks of TV or VCR refers to above sections,
   1. Connecting to Antenna, ***2. Receiver to TV with RF*** and ***3. Receiver to TV and VCR.***



Digital Audio Equipment

Guide of Functions

1. Select Service

To select the desired service, you can use below methods.

1.1 Using UP/DOWN buttons

You can navigate between services using **UP/DOWN** buttons. Whenever you press the **UP(DOWN)** button, current service will be changed to next(previous) service. You have to press **UP** or **DOWN** button until find the service you want.

1.2 Using NUMERIC buttons

If you know the service number, enter the number directly using **NUMERIC** buttons.

1.3 Using Service List

To select the desired service in the service list, you should firstly display the service list using **OK** button.
Use **ARROW** buttons to select a desired service and press **OK** button.

In the Service List window, you can also use additional functions with **COLOR** buttons.
Press **RED** button, you can sort the services by Alphabet, Transponder, Group and CAS.
Press **GREEN** button, you can add the service to one of 10 favorites.

2. Information Window

If, you want to view the current service information window press **INFO** button. Then the Information window will appear.
This Information window is automatically displayed when changing services. This window contains many items such as service number, service name, scrambled service, Teletext, subtitle, Dolby Digital symbol, duration time and so on.
Press **INFO** button once more, you can get more detailed information

3. Multi-Picture Display

Press the **BLUE** button to display multiple pictures and **RED** button display 9 or 12 multiple pictures option.

4. Electronic Program Guide(EPG)

Electronic Program Guide (EPG) helps you navigate through all the possible viewing options.
The EPG supplies information such as program listings, start/end times and detailed information about the program listings for all available services.
The availability and amount of these program details will vary, depending on the particular broadcaster.

1. If you press **EPG** button, EPG menu will be displayed.
2. Press the **ARROW** buttons to move to other service or to see previous/next guide.
3. Press **EPG** button once to view full EPG (Entertainment Program Guide) and press button twice to view only selected EPG. Press button consecutively to go back and forth.
4. Press **GREEN** button to view next day EPG and **RED** button to view EPG for previous day.
5. Select the program by using the **ARROW** buttons then set the timer by pressing **OK**.
6. You can make a reservation for recording on EPG menu.
   - Press **RECORD** button to reserve the event. This reservation can be checked under the Timer Manager Menu.
   - To cancel the reservation for recording by **RECORD** button at the appointed event.

5. Satellite List

Select the **SAT** (satellite) button to view all satellite & terrestrial listings. Scroll through the various satellites using the **ARROW** buttons, and select the appropriate satellite by pressing **OK**.

6. Favorite Group

Select the **FAV** (favorite) button to view all favorite groups. Scroll through the various favorite group using the **ARROW** buttons, and select the appropriate satellite by pressing **OK**.

7. Volume Control

1. To control audio volume while you are watching a service, press **LEFT**/**RIGHT** button to control volume.
2. Volume control bar will be appeared in top of the screen.
3. When necessary, press **MUTE** button to turn audio sound on/off.

8. PAUSE

The **PAUSE** button is used to freeze the video. Press **PAUSE** button once more to resume the video.

9. Sub-Title

To display Sub-title press **SUBTITLE** button on your remote control. Sub-title is based on the transmitted data.

10. Audio Track

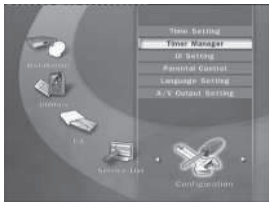
You can select the audio language list by pressing the **AUDIO** button. Use the **ARROW** buttons to choose the audio track from the list than press **OK** to change.

11. Time shifting, Recording and Playback

11.1 Recording

① **Recoding Method:** There are two types of recording method.
(Time Reserved Recording / Event Reserved Recording).

a) Time Reserved Recording:
In Timer Manager you may set your time/program during this process.
- Main Menu - Configuration - Timer Manager.



- Press **GREEN** button to activate the new timer edit screen
- Timer Edit screen you may choose start time, end date/time, mode, type (Recording/Play) and simply press **Yes** button to reserve you recording schedule. Also, you must set you start time and end time to minimum of 5 minutes; start time must be present time.

b) Event Reserved Recording:
EPG screen choose the event you wish to reserve or record.
- During LIVE TV press **EPG** button to access EPG screen.

- Go to the event which you wish to view and then press **OK**. The event will be reserved with **BLUE play icon**. ▶ This BLUE play icon means that you want to just watch the event at the reserved time.

- Press the **OK** one more time then the event will be reserved with **RED dot icon**. ● This RED dot icon means that you want to record the event at the reserved time.

- When you set an event for recording in EPG. It automatically set in the Timer Event in Main Menu - Configuration - Timer Manager.

② **Instant Recording:**
At anytime, you may press **RECORD** button to start you recoding instantly.

③ **Recording Edit:**
During recording, you may press **RECORD** button to edit recording duration time. As it defaulted to 2 hours but you may increase or decrease as you desire.

④ **Long Time recording:**
During long time recording process 4GB or more, additional files may be created every 4GB.
(For example; aaa.ts, aaa.ts1, aaa.ts2… and so on) You must remember not to erase any of duplicated file. These files are only able to view with your PC not with receiver**.**

⑤ **Pause during recording**

a) Press **PAUSE** (❚❚) button to pause the live TV but will continue to record to you external HDD.

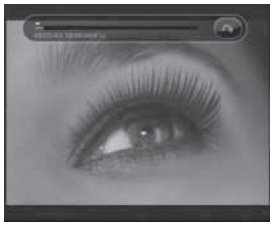
PAUSE icon ←

b) Press **PAUSE** button once again and event will resume from the pause time.

Play icon ←

c) During recording press **PLAY** button to show Play bar screen.

d) During Play bar screen you may use the **RIGHT/LEFT** button to move freely in recorded time.



e) If you press **STOP** button it will go to **LIVE** and you may press **PREV FILE** ⏮) button to view recorded file from the beginning.

11.2 Time shift

① Press **PAUSE** button to pause the live TV but will continue to record to external memory.

② Press **PAUSE** button once again and event will resume from the pause time.

③ During watching live TV press **PLAY/TIMESHIFT** button to show play bar screen.

④ During play bar screen you may use the ◀ / ▶ **ARROW** buttons to move freely in recorded time.

⑤ If you press **STOP** button during timeshift, screen will be changed to live TV. You may press **PREV FILE**(⏮) button to move to start location in recorded time.

11.3 Playback

① Press the **PLAY LIST** button to activate the Play List screen.

② In Play List you may choose any of pre-recorded event(s) and play it by pressing **OK** button.

③ In Play List screen, you may press **RED** button to choose the event you wish to view in order listed in Play List.

④ In Play List screen, **GREEN** button to delete or rename already recorded event.

⑤ You may press **PAUSE** button at any time to pause a pre-recorded event.

⑥ Press **PAUSE** button once again to resume play of the recorded event.

11.4 Bookmark

① During Play bar you may move to desire time and book mark by pressing the **RED** button. Bookmark(s) are indicated with Green line on the play bar.

② Also, You may press **RED** button to activate play bar to mark your bookmark(s).

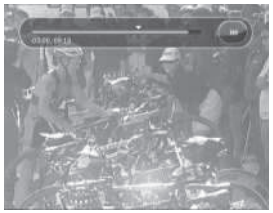
③ On play bar any pre-marked bookmarks can be move from bookmark to bookmark by pressing the **GREEN** button.

④ Any Bookmark you wish to remove goes to the bookmark you wish to remove by pressing the **RED** button.

11.5 Trick mode

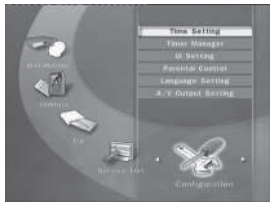
① During play, press the **FAST FORWARD** button once to 2X faster than regular playing speed and once more to 3X faster.

② During play, press the **REWIND** button once to 2X faster than regular playing speed.



Guide of Main Menu

To display the menu, press **MENU** button at any time. You can select the sub menu using **ARROW** buttons. The selected sub menu becomes highlighted. When you have selected the sub menu you want, press the **OK** button. If you want to return to the previous menu, press the **MENU** button. And if you want to exit from the menu, press the **EXIT** button.



1. Configuration

1.1 Time Setting

① **Time Setting:** To set the current time, you can use two modes; Auto and Manual.

Auto Time Setting

- **Local Offset** : Enter the offset value using the standardized information of current service area.
- **Daylight Saving** : If you want to apply daylight saving, select the country using **ARROW** buttons.

Manual Time Setting

- **Date** : Enter the calendar date by using **ARROW** buttons then press **OK** to finish.
- **Time** : Enter the time by using the **NUMERIC** buttons.

② **Clock Mode :** Select the type of clock display(12 Hours or 24 Hours) using **ARROW** buttons.

③ **Wake Up Mode :** Enter the time for the receiver to automatically power ON.
Enter the time for the receiver to automatically power ON.
And you can choose one of Wake Up Mode as 'off' or 'Once' or 'Daily' or 'Weekly'.

- **Wake Up Date** : Select the date when STB is turn on. Press **OK** button to display calendar.
- **Wake Up Days** : Select a day of the week when STB is turn on.
- **Wake Up Time** : Enter the turn-on time of STB using **NUMERIC** buttons.
- **Wake Up Service** : Select the service when STB is turn on. Press **OK** button to display service list.

④ **Sleep Mode :** Enter the time for the receiver to automatically switch OFF and go to standby mode.
Enter the time for the receiver to automatically switch OFF and go to standby mode.
And you can choose one of Wake Up Mode as 'off' or 'Once' or 'Daily' or 'Weekly'.

- **Sleep Date** : Select the date when STB is turn off. Press **OK** button to display calendar.
- **Sleep Days** : Select a day of the week when STB is turn off.
- **Sleep Time** : Enter the turn-off time of STB using **NUMERIC** buttons.

1.2 Timer Manager

Insert new timer entry or modify exist timer entry.

① **To add new timer entry** :
Press **GREEN** button. Timer Edit window will be popup. You can specify start date, time, duration and service for reservation. And you can choose one of Timer Mode as ***'Once'*** or ***'Daily'*** or ***'Weekly'***.
You can choose timer operation type as ***'Recording'*** or ***'Play'***.
- If you choose ***'Recording'***, it will start recording at that time.
- If you choose ***'Play'***, it will change the service what you watch.

② **To modify exist timer entry** :
Choose one timer entry you want to modify and press **OK** button.

③ **To delete exist timer entry** :
Choose one timer entry you want to delete and press **RED** button.

> **NOTE** *If you reserve one or more event through the EPG menu, the reserved event(s) will be added to Timer Manager automatically.*

1.3 UI Setting

① **OSD Transparency :** Set the OSD transparent type.

② **Info Box Position :** Set the information window position.

③ **Info Box Display Time :** Set the display duration of information window displayed on the screen after changing services.

④ **Volume Bar Display Time :** Set the display duration of volume bar displayed on the screen after changing volume.

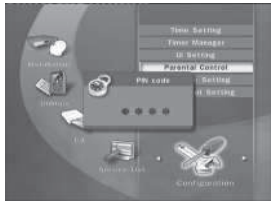
⑤ **EPG OSD Type :**
Set ' Transparent' : If you press **EPG** button, selected service will be played in the background of EPG window.
Set ' Picture in Graphic' : If you press **EPG** button, selected service will be played within the small box.

⑥ **EPG Time Range :** You can set the time range which is displayed at the same time in the EPG window.

⑦ **Zapping mode :** You can set the zapping mode. Black screen means display the black screen when channel changed. Freeze means display the last picture when channel change.

1.4 Parental Control

Access to services and programs is controlled by a 4-digit secret code that is defined by the user. Whenever you attempt to access parental control menu, the pop-up window will instruct you to input a PIN code.
(If necessary, you can change it.)



> **NOTE** *The default PIN code is **'0000'**.*

① **Censorship :** Set the parental guidance rating of highlighted censorship classification. The parental level is given as age-based numbers.

② **Change Pin code :** To change your PIN code, input the new PIN code using **NUMERIC** buttons. To verify the new PIN code, input the new PIN code again.

③ **System :** Set the accessibility of system.

④ **Installation :** Set the accessibility of Installation menu.

⑤ **Configuration :** Set the accessibility of Configuration menu.

⑥ **Edit Service :** Set the accessibility of Edit Service menu.

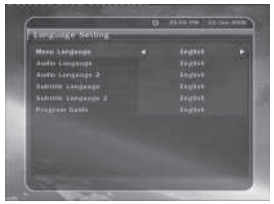
1.5 Language Setting

① **Menu Language :** Select the desired menu language by using the **ARROW** buttons.

> **NOTE** *The Kind of languages can be changed depending on the country. Languages are subject to change without prior notice.*

② **Audio Language :** Select the default language for audio when changing services. If no language is provided, then the default language of current service will be automatically selected.

③ **Subtitle Language :** Select the default language for subtitle when changing services.



1.6 A/V Output Setting

① **TV Type :** Select the TV types.(PAL/NTSC/Auto) In Auto mode, the STB is automatically selected as NTSC or PAL according to the service played.

② **TV Aspect Ratio :** Select the aspect ratio of TV which is connected to STB.(4:3/16:9)

③ **Display Format :** Select the format which the video is to be displayed on screen. (Letter Box/Pan Scan) In case of 16:9 mode, this option is not available.

④ **Video Output Mode :** When you use a SCART cable to watch TV, you can select the video output mode. (CVBS or RGB)

⑤ **Sound Mode :** Set the audio mode which is output from the RCA jack. (Stereo/Mono/Left/Right)

⑥ **RF Type :** Select the RF type. (PAL G/I/K)

⑦ **RF Channel :** Select a RF channel. (21~69)

⑧ **Picture Adjust :** Adjust brightness, contrast and color of screen.

2. Installation

2.1 Dish Setting

Select the antenna and LNB settings for service search. The values that are set in this menu will be available for selection in other service searching menus.

① **Satellite :** Select the satellite what you want to search the service.
- Press the **LEFT/RIGHT** button to select the satellite.
- Select the wanted satellite name.
- If the desired satellite name is not listed then select User Defined.

② **Frequency** : Select frequency what you want to check the signal.

③ **LNB Power** : Select the LNB power.

④ **LNB Type :** Select the LNB type.

⑤ **LNB Frequency :** Select the L.O. frequency that is set to antenna.
- Use the **LEFT/RIGHT** buttons to select the LNB frequency.
- If the required LNB frequency is not listed, then enter the frequency manually using the **NUMERIC** buttons.
- When you select Universal in LNB type, both 9750 and 10600 are supported at the same time. And LNB 22KHz setting is disabled.

⑥ **LNB 22 KHz:** When you use a dual LNB or two antennas connected to a 22 KHz tone switch box, make 22 KHz tone switch enable or disable to select LNB or antenna.

⑦ **DiSEqC 1.0 :** If you use a DiSEqC 1.0 switch, select one of the DiSEqC inputs.

⑧ **DiSEqC 1.1 :** If you use a DiSEqC 1.1 switch, select one of the DiSEqC inputs.

⑨ **0 / 12v :** Select the 12v on / off.

⑩ **Service Search :** Press **OK** button to move to Service Search menu directly.

2.2 Positioner Setting

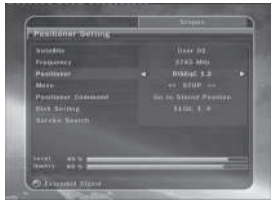
① **Satellite :** Select the satellite what you want to search the service.
- Press the **LEFT/RIGHT** button to select the satellite.
- Select the wanted satellite name.
- If the desired satellite name is not listed then select User Defined.

② **Frequency :** Select frequency what you want to check the signal.

③ **Positioner :** Select the positioner.

None *(No Positioner)*

Using DiSEqC 1.2
- **Move :** To move the dish, press **LEFT/RIGHT** button.
- **Positioner Command :**
  To use various positioner command, press **OK** button.
  Then, available positioner commands will appear.



Using USALS
- **Move** : To move the dish, press **LEFT/RIGHT** button.
- **Dish Longitude** : Enter the longitude using the **NUMERIC** buttons.
- **Dish Latitude** : Enter the latitude using the **NUMERIC** buttons.
- **Go To** : Press **OK** button to rotate the dish to the configured position.

④ **Dish Setting :** Press **OK** button to move to Dish Setting menu directly.

⑤ **Service Search :** Press **OK** button to move to Service Search menu directly.

2.3 Service Search

① **Satellite :** Select the target satellite for search.

② **Search Mode :** Select the following search mode.

Auto Search Mode
- **Satellite :** Press OK button to select multiple satellites.
- **Search Type** : Select the search type.
- **Network Search** : You can select *Off* or *On*. When you select '*On*', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.
- **Dish Setting** : Press **OK** button to move to Dish Setting menu directly.
- **Positioner Setting** : Press OK button to move to Positioner Setting menu directly.
- **Start Search** : Press **OK** button to start search.

Blind Search Mode

- **Frequency** : Set Auto to search whole frequency, Set Manual to search only desired frequency.
- **Polarity** : Select the Horizontal or vertical polarization you wish to search.
- **Search Type** : Select the search type.
- **Start Search** : Press **OK** button to start search.
- **Dish Setting** : Press **OK** button to move to Dish Setting menu directly.

Manual Search Mode

- **Frequency** : Select the frequency from the list to search.
- **Symbol rate** : Enter the symbol rate using the **NUMERIC** buttons.
- **Polarity** : Select the polarity.
- **Search Type** : Select the search type.
- **Network Search** : You can select *Off* or *On*. When you select '*On*', you can find more transponders using the home network. As it refers to NIT during searching, if there is the frequency information of other transponder, it searches the other transponder besides the transponder that the user inputs.
- **Start Search** : Press **OK** button to start search.
- **Dish Setting** : Press **OK** button to move to Dish Setting menu directly.

Advanced Search Mode

- **Frequency** : Select the frequency from the list to search.
- **Symbol rate** : Enter the symbol rate using the NUMERIC buttons.
- **Polarity** : Select the polarity.(Vertical/Horizontal)
- **Video PID** : Enter the video PID using the NUMERIC buttons.
- **Audio PID** : Enter the audio PID using the NUMERIC buttons.
- **PCR PID** : Enter the PCR PID using the NUMERIC buttons.
- **Start Search** : Press OK button to start search.

2.4 Terrestrial Search

Search Mode : Select the following search mode.

Auto Search Mode

- **Search Type** : Select the search type.(All Service/FTA Only/TV Only)
- **Antenna 5V** : If you want to out the power of antenna, select the power on.
- **Start Search** : Press **OK** button to start search.

Manual Search Mode

- **Channel** : Select the channel what you want to search.
- **Frequency** : Information of channel frequency.
- **Bandwidth** : Information of channel bandwidth.
- **Search Type** : Select the search type.(All Service/FTA Only/TV Only)
- **Start Search** : Press **OK** button to start search.

2.5 System Recovery

① **System restore to factory default :**
This menu allows you to restore the factory set values in case the user has encountered some problems after changing any new values of service data and others which may be in error. Press **OK** button to erase all services and restore default setting.

② **System restore to stored position :**
This menu allows you to restore the stored values including service data and system parameters. Press **OK** button to restore all data.

③ **Store system data :**
If you want to use system parameters and service data in the future, this menu allows you to store current state. Press **OK** button to store current state.

2.6 System Information

This displays general information about what hardware and software version your receiver is running on.

3. Utilities

3.1 USB

① **Configuration** : The **STB** has two USB port. One is the front panel and the other is in the rear panel. With this option, you can activate or inactivate these USB ports.

- **Front** : Activate front USB port. In this case rear USB port is not available.
- **Auto Detect** : Activate the USB port which is connected to external USB device automatically.
- **Rear** : Activate rear USB port. In this case front USB port is not available.

② **MP3 Player** : Stick the external USB memory into the provided USB port on front panel. Once inserted, press **OK** button to read external USB memory stick and choose the MP3 file from the window you want to play.

- Press Info Button to show the **ID3 tag** information.

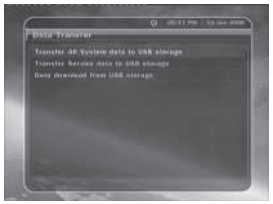
③ **Image Viewer** : You can display the image file that is in the external USB memory stick on the screen. Select the image file(JPEG format) and press **OK** button to display the image.

④ **Playlist :**
Press the OK button to activate the Play List screen. (Refer to Playback)

⑤ **Format(USB)** :
Before you use your USB external device, we recommend for you to format it by Format(USB) menu.

NOTE	*If you execute format, all data will be deleted.*

3.2 Data Transfer



① **Transfer all System data to USB storage :**
If you want to use system parameters and service data in the future, this menu allows you to store current state. Press **OK** button to store current state to external USB storage.

② **Transfer Service data to USB storage :**
If you want to use service data in the future, this menu allows you to store current service data. Press **OK** button to store current service data to external USB storage.

③ **Data download from USB storage :**
This menu allows you to download the stored data from external USB storage. Press **OK** button to download data.

3.3 Recording Option

Recording Stop Message :
Set 'On' : When you press **STOP** button in recording, confirm window is displayed.
Set 'Off' : When you press **STOP** button in recording, STB will stop recording immediately with no message.

Time Shift(USB) :
You can adjust the time such as 30 Min / 60 Min / 120 Min / 150 Min / 180 Min. In this case, time shifting function works automatically up to time you set, if external USB device have enough space. If you set 'off' this option, time shifting function never works.

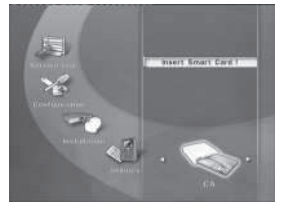
3.4 Calendar

To display calendar, press **OK** button. Utilize **ARROW** buttons to choose the date, button **UP/DOWN** will switch from past/next month.

3.5 Calculator

To use a calculator, press **OK** button.

4. CA



4.1 Conax smart card menu

To watch scrambled services, you need to have a appropriate Conax smart card from the service providers. Insert a valid smart card into smart card slot. The message of 'Smart card Initializing…' will appear on the screen. After message disappear, you can watch the service you want.

4.2 Smart card information

You can view the current status of smart card.

- Select the slot what you want to view using **ARROW** buttons. And press **OK** button.

5. Service List

5.1 Service List Manager

Service List Manager menu will be appeared when press **OK** button.
You can select Edit Mode by press **YELLOW** button.

① **Lock Services :**
All service lists will be shown on left side of window, right side will show make service to be lock. By using **ARROW** and **OK** button you may move the chosen service to right side window to lock service.

② **Move Services :**
All Service Lists will be shown on left window, Service Lists for moving will be shown on right Window. Move the Service to Right window by using **ARROW** and **OK** button, then right window services will be moved to related location when select desired location from the left window.

③ **Delete Services :**
All service lists will be shown on left side of window. By using **ARROW** and **OK** button you may select services to be delete. And press **GREEN** button to delete the selected services.

④ **Skip Services :**
All service lists will be shown on left side of window, right side will show make service to be skip. By using **ARROW** and **OK** button you may move the chosen service to right side window to skip service.

⑤ **Set Favorites :** Press **FAV** button to mark the favorite group list. Once, favorite group is chosen, left side window will show all service list marked and right side window will show only the marked service list. Using **ARROW** and **OK** buttons you may add any service to the favorite group or delete any service from the favorite group.

⑥ **Edit Service Name :**
All service lists will be shown on left side of window.
Move the highlighted bar to the service what you want to edit its name and press **OK** button. Then you can see the virtual keyboard.
Using **ARROW** and **OK** buttons, you can edit the service name.

5.2 Service List Option

① **Service List Preview**

Setting 'ON' :
If you change service using **ARROW** buttons and press **OK** in the Service List, service will be played which you want.
But Service List still remains. To remove Service List on screen, press **OK** one more time.

Setting 'OFF' :
If you change service and press **OK** in the Service List, service will be played. And Service List disappear at the same time.

② **Lock Favorite Popup**

Setting 'ON' :
If you press **GREEN** button to open Set Favorite menu, you must enter PIN code.

Setting 'OFF' :
PIN code is not required.

③ **View Only Filtered List**

Setting 'ON' :
If you sort services with any category(A~Z, Transponder, Group or CAS) in the Service List, only filtered services will be shown on the Service List.

Setting 'OFF' :
All services will be shown on the Service List. And filtered services are highlighted with yellow color.

Troubleshooting

Problem	Solution
Does not display any message on the front panel.	- Check the main power cable and check that it is plugged into a suitable power outlet. - Check you have switch the STB main power switch ON at the rear of the STB.
No Picture	- See 'Does not display any message on the front panel' above. - Check the video output port is firmly connected to the TV or VCR. - If you are using the RF output, check that the RF lead is connected firmly to the STB and TV/VCR. - Check that you have selected the correct channel or Video Output on your TV. - If you are using the RF Output, check that you have correctly tuned the UHF channel of the STB or TV. - Check the brightness level of the TV.
Poor picture quality	- See '**No Picture**' above. - Check the signal level, if this is low then try adjusting the alignment of your dish.
No Sound	- See '**No Picture**' above. - Check the volume level of the TV and STB. - Check the Mute status of the TV and STB.
Remote Control does not operate	- Point remote control directly towards the STB. - Check and replace batteries.
No or Bad Signal	- Check the LNB ; Replace LNB if necessary. - Check the cable from the LNB. - Check the position of the dish; realign dish if necessary. - Check the connection of Aerial or CATV line. - If you are using a DiSEqC 1.0 switch, check that you have connected the LNBs to the correct connections on the switch. - Check the 'Signal Level' and the 'Signal Quality'.

Specifications

Tuner & Channel Decoder (Satellite)

Input Connector	F-type, IEC 169-24, Female
Loop through out	F-type, IEC 169-24, Female
Frequency Range	950MHz ~ 2150MHz
Input Impedance	75Ω, unbalanced
Signal Level	-65 to -25dBm
LNB Power	13/18VDC, max.400mA
22KHz Tone	(22±2)KHz, (0.6±0.2)V
DISEqC Control	V1.0/1.2/USALS Compatible
Demodulation	QPSK
Input Symbol Rate	2 ~ 45 Ms/s
FEC Decoder	1/2, 2/3, 3/4, 5/6 and 7/8 with Constraint Length K=7

Tuner & Channel Decoder (Terrestrial)

Input Connector	F-type, IEC 169-2, Female
Loop through out	F-type, IEC 169-2, Male
Frequency Range	VHF III : 174~230 MHz UHF IV : 470~606 MHz UHF V : 606~862 MHz
Demodulation	OFDM
Channel Bandwidth	6, 7, 8 MHz
FET mode	2K, 8K
Code Rate	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32

MPEG Transport Stream A/V Decoding

Transport Stream	MPEG-II ISO/IEC 13818
Profile Level	MPEG-II MP@ML
Input Rate	Max. 15Mbit/s
Video Formats	4:3 LetterBox, 4:3 PanScan, 16:9
Video Resolution	720 x 576, 720 x 480
Audio Decoding	MPEG/MusiCam Layer I & II
Audio Mode	Stereo/Joint stereo/Mono
Sampling Rate	32KHz, 44.1KHz and 48KHz

Main System

Main Processor	Conexant Virgo
Memory	Flash-ROM : 2 MBytes SDRAM : 32 MBytes

Audio / Video & Data IN/OUT

TV SCART	RGB, CVBS Video, Audio L, R Output
VCR SCART	CVBS Video, Audio L, R Output RGB, CVBS, Audio L, R Input
RCA	CVBS Video Output, Audio L, R Output
OPTIC	AC-3 Dolby Digital (S/PDIF)
RS-232C	9 pin D-SUB (Male) type, Transfer rate 115Kbps
USB	Dual USB 2.0 Host Support (Front & Rear)

RF Modulator

RF Connector	75Ω, IEC 169-2, Male/Female
Frequency	470 ~ 860MHz
Output Channel	CH 21 ~ 69 for the Remodulator
TV Standard	PAL G/I/K Selectable by Menu
Preset Channel	CH 36 (or TBD) Software changeable by Menu

Front Panel

Slot	1 USB Host Slot 1 Smart Card Slot
Buttons	7 Buttons
Display	VFD(Vacuum Fluorescent Display)

Power Supply

Input Voltage	AC 100 ~ 250V, 50/60Hz
Type	SMPS
Power Consumption	Max. 25W
Standby Power	Max. 8W
Protection	Separate Internal Fuse & Lighting protection

Physical Specification

Size (W x H x D)	340mm X 60mm X 230mm
Weight (Net)	1.6 Kg
Operating Temp.	0℃ ~ +45℃
Storage Temp.	-10℃ ~ +70℃